

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-016844**Date Inspected:** 25-Aug-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See Below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

CWI Inspectors: Mr. Shi Lei, Mr. Zhu Zhong Hai

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. This QA Inspector observed the following:

OBG Segment Trial Assembly

This QA Inspector observed ZPMC welder Mr. Zang Yanbo, stencil 045196 used shielded metal arc welding procedure WPS-345-SMAW-FCM-4G(4F)-Repair to perform critical weld repairs of weld SEG051A-045. This QA Inspector measured a welding current of approximately 150 amps and Mr. Zang Yanbo appeared to be certified to make this weld. This QA Inspector observed the welding electrodes were stored in a heated portable electrode storage container. This weld repair is on the exterior surface of the side plate to bottom plate on the bikepath side of OBG segment 9BW. This welding is being documented on critical weld repair document B-CWR1852. ZPMC has recently obtained Caltrans approval of ZPMC's "CWR Operation Flow Chart" process revision 1, dated 08-20-2010. This document states ZPMC is required to "Inform Caltrans/American Bridge personnel via email with CWR number, part number and part location prior to commencing critical weld repairs. This QA Inspector observed Caltrans did not receive notification from ZPMC concerning critical weld repair BCWR-1852 as stated in the "CWR Operation Flow Chart". This QA Inspector observed ZPMC has performed critical weld repairs of BCWR-1852 of OBG segment 9BW weld SEG051A-045 at Y=3870 mm and that Mr.

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Zang Yanbo is nearly completed the weld at location Y=3790mm. This is the second repair of weld SEG051A-045 due to ultrasonic rejections. Both side plate SP769A and bottom plate BP152A are classified as Seismic Performance Critical Materials. This QA Inspector discussed the lack of notification with ZPMC CWI Mr. Zhu Zhong Hai and ABF representative Mr. Kelvin Chueng and this QA Inspector issued an incident report to document this problem. Items observed on this date do not fully appear to comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Wang Chang Ming, stencil 047864 was preparing to use shielded metal arc welding procedure WPS-345-SMAW-FCM-1G(1F)-Repair to perform critical weld repairs of weld SEG051A-045 at location Y=1130 on the inside surface of OBG segment 9BW. This welding is being documented on the same critical weld repair document (B-CWR1852) as listed above. This QA Inspector observed Mr. Wang Chang Ming appeared to be certified to perform this welding and Mr. Wang Chang Ming left the area prior to performing any welding.

This QA Inspector observed ZPMC welder Mr. Wang Xiaomin, stencil 046709 used shielded metal arc welding procedure specification WPS-345-SMAW-4G(4F)-Repair-1 to complete repairs of weld SEG053B-006 as directed on weld repair document B-WR14566. This weld repair document was issued to perform repairs of ultrasonic rejections in OBG longitudinal diaphragm in segment 9CW near panel point PP079. This QA Inspector observed Mr. Wang Xiaomin appeared to be certified to make this weld and ZPMC QC has recorded a welding current of 152 amps. Items observed on this date appeared to generally comply with applicable contract documents.

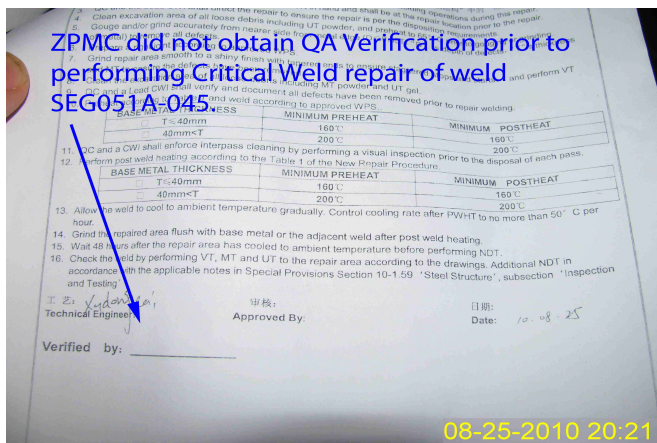
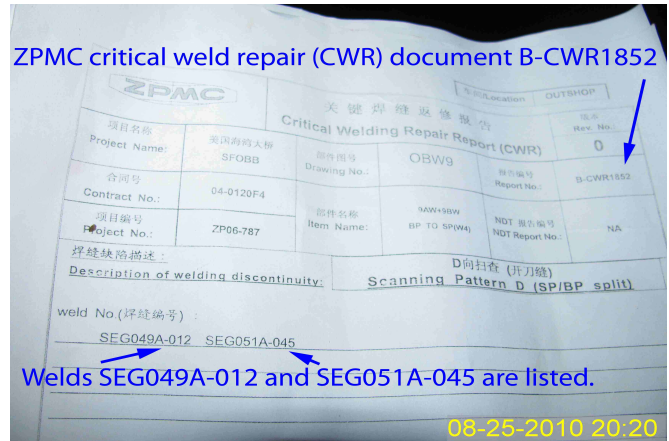
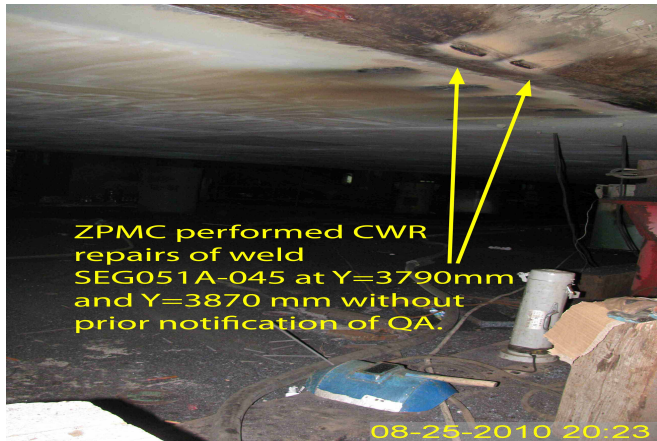
This QA Inspector observed ZPMC welder Mr. Cao Laiyin, stencil 040673 used shielded metal arc welding procedure specification WPS-345-SMAW-1G(1F)-Repair-1 to complete repairs of weld EP129-001-128 as directed on weld repair document B-WR14683. This weld repair document was issued to perform repairs of ultrasonic rejections in OBG segment 9DW to 9EW corner assembly near panel point PP082. This QA Inspector observed Mr. Cao Laiyin appeared to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Cheng Chong Lang, stencil 251194 used shielded metal arc welding procedure WPS-345-SMAW-2G(2F)-Repair-1 to make weld repairs of visual rejections on OBG segments 9DW to 9EW bottom "T" stiffener hold back welds BP100-001-031 through -042. This QA Inspector observed Mr. Cheng Chong Lang appeared to be certified to make these welds and ZPMC personnel used a torch to preheat the base material prior to welding. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Zhang Qiu Jun stencil 057333 used shielded metal arc welding procedure specification WPS-B-T-2231T-1 to complete weld OBW9K-003. This weld was located on the counterweight edge plate on OBG segment 9EW. This QA Inspector observed a welding current of approximately 145 amps, Mr. Zhang Qiu Jun appeared to be certified to make this weld and the base materials were preheated with electric heaters. Items observed on this date appeared to generally comply with applicable contract documents.

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Summary of Conversations:

See Above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang phone: 150-0042-2372 , who represents the Office of Structural Materials for your project.

Inspected By: Dawson,Paul
Reviewed By: Carreon,Albert

Quality Assurance Inspector
QA Reviewer